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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/790,497	03/01/2004	Satoshi Yamaguchi	249444US3	9499

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OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C.  
1940 DUKE STREET  
ALEXANDRIA, VA 22314

EXAMINER

TUGBANG, ANTHONY D

ART UNIT	PAPER NUMBER
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3729

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	12/21/2006	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

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<b>Office Action Summary</b>	<b>Application No.</b> 10/790,497	<b>Applicant(s)</b> YAMAGUCHI, SATOSHI	
	<b>Examiner</b> A. Dexter Tugbang	<b>Art Unit</b> 3729	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 27 November 2006.
- 2a) ☐ This action is **FINAL**.      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) 5-18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>3/1/04, 1/6/05</u> | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election with traverse of the invention of Group I, Species I-A, Claims 1 through 4, in the reply filed on November 27, 2006 is acknowledged. The traversal is on the ground(s) that there would be no undue burden to search and examine all of the inventions. This is not found persuasive because each invention clearly has separate lines of patentability and can support separate patents. Furthermore, the searches for each of the inventions would be non-coextensive, would each required different search fields and text search queries, as well as the application of different art and even different case law. All of these factors taken into consideration would clearly place a burden on the examiner to search and examine all of the inventions.

The requirement is still deemed proper and is therefore made FINAL.

2. Claims 5 through 18 have been withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on November 27, 2006.

### ***Specification***

3. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: --A Method of Manufacturing a Magnetic Head Device--.

***Claim Objections***

4. Claims 2 through 4 are objected to because of the following informalities: in each of Claims 2, 3 and 4 (at line 2), the phrase of "a laser beam" should be replaced with --the laser beam--. Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 1 through 4 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In Claim 1, it is unclear if the latter recitation of "a laser beam" (line 12) is referring to the previous recitation of "a laser beam" (line 3). How many laser beams are there? This double recitation is misleading and confusing, rendering the claim as vague and indefinite.

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1 and 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pattanaik 5,828,031 in view of Japanese Patent Publication, JP 5-226889, referred to hereinafter as JP'889.

Pattanaik discloses a manufacturing method (in Figs. 1 and 2) of a magnetic head comprising: providing terminal pads (e.g. 18) of a magnetic head slider (e.g. 12) to connections pads (e.g. 28) of a lead conductor member (e.g. 24) that is to eventually be connected to the magnetic head slider; supplying conductive metal material (e.g. solder 30) for connecting the terminal pads and the connection pads; and performing molten-metal connections between the terminal pads and the connection pads by irradiating a laser beam (e.g. 34) to the conductive metal material.

Pattanaik does not teach a preheating step of irradiating a first laser beam to the terminal pads and the connection pads.

JP'889 shows that it is known in the art to initially preheat terminal pads (not labeled) of one component (e.g. 40) and connections pads (not labeled) of a lead conductor member (e.g. 41) by irradiation with a laser beam thereby providing at least one advantage of allowing optimum temperature conditions for subsequently soldering the connections between the terminal pads and the connection pads (see Constitution).

Regarding Claim(s) 2, the optimal temperature conditions that JP'889 achieves secures wettability of the conductive metal material (e.g. solder).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the method of Pattanaik by adding the preheating step in the manner taught by JP'889, to positively allow optimum temperature conditions for connections of the terminal pads and the connection pads.

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9. Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pattanaik in view of JP'889, as applied to Claim 1 above, and further in view of Japanese Patent Publication JP 2-246188, referred to hereafter as JP'188.

Pattanaik, as modified by JP'889, teaches the claimed manufacturing method as relied upon in Claim 1. The modified Pattanaik method does not teach that the laser beam, within the step of preheating, has any stepwise changes (as required by Claim 3), or that the magnetic head slider is heated to a temperature of 150°C or less.

JP'188 teaches that laser beams can be controlled to produce a stepwise change of temperature from a low point to a high point (Fig. 2b) for the purpose of establishing and controlling molten metal connections.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the method of Pattanaik by controlling the laser for preheating to produce a stepwise change, as taught by JP'188, to advantageously establish and control the molten metal connections.

Regarding Claim(s) 4, to preheat the magnetic slider to a temperature of 150° C or less with a laser beam would have been an obvious matter of design choice to one of ordinary skill in the art. The applicant(s) have not disclosed that the claimed temperature range for the slider solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well with the temperature ranges taught by Pattanaik and JP'188. Moreover, the temperature of the slider during preheating has no materially different effect, or impact, on the manufacturing steps, as claimed.

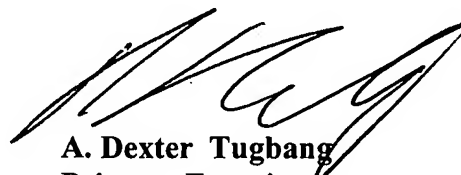
***Conclusion***

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to A. Dexter Tugbang whose telephone number is 571-272-4570. The examiner can normally be reached on Monday - Friday 7:30 am - 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Vo can be reached on 571-272-4690. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
**A. Dexter Tugbang**  
**Primary Examiner**  
**Art Unit 3729**

December 7, 2006